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Deliverable 4.1- Report on the Definition and Typology of Alignment

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1. Introduction¹

1.1 Background and rationale

In December 2008, the Council of the European Union endorsed the concept of “Joint Programming” to promote the pooling national research efforts in view of making better use of Europe's public R&D resources and tackling jointly societal challenges.² Joint Programming is a strategic process whereby EU Member States and Associated Countries ought to agree on common visions and Strategic Research Agendas (SRA) to address major societal challenges. The Joint Programming Process relies on the principles of variable geometry and voluntary participation: countries participate in joint actions that are in line with their national research priorities and capacities. Joint Programming in the EU context aims to structure research efforts in view of helping establish the European Research Area (ERA) and tackle societal (global) challenges more effectively. A recent report by the EC Joint Research Centre however notes that European collaboration at the research programming stage is still in its early stages.³

Joint Programming Initiatives (JPI) are perceived as key ERA building blocks that should act as strategic platforms for research and innovation in their respective field.⁴ The practical implementation of Joint Programming Initiatives mainly relies on the **alignment** of existing or planned national (and regional) research programmes and activities. The European Research Area and Innovation Committee's High Level Group for Joint Programming's (GPC) Report on Alignment in fact notes that “*alignment is the key to successful joint programming*”.⁵ Currently though, there are various interpretations of what alignment means as it can take various forms. It is therefore important to build **mutual understanding** regarding the various facets of alignment and better gauge the stumbling blocks that currently hinder substantial progress in this area.

1.2 Objective and methodology

The present report recommends to adopt a common definition of alignment in a public-public partnership (P2P) context based on the definition elaborated in 2014 by the *High Level Group for Joint Programming (GPC)*, and proposes a **typology** (i.e., classification)⁶ of alignment actions and instruments currently in use in Europe. This typology will form the basis for developing a **more in-depth comparative assessment** that will guide national research funding agencies, research performing organisations and individual researchers in their choice of alignment approaches, actions and instruments (see below).

The report is based on a review of existing literature (desk research) as well as on inputs received during the *Workshop on the Practical Implementation of Alignment: Learning from Good Practice* held in Brussels on 29 September 2015 (see event agenda and papers [here](#)). Previous versions of this report have also benefitted from comments and suggestions from the ERALEARN2020 Project Team and Advisory Board.

1.3 The ERALEARN2020 project

The report corresponds to the first deliverable under Work Package 4 (WP4) of the ERALEARN 2020 project. WP4 aims to “*assess and benchmark current approaches to alignment and explore options for new modalities to better align national and/or regional activities under common research agendas*”.⁷ WP4 is divided into five Tasks to be carried out over a three-year period (2015-18, see Table 1 below). As noted

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² Currently, about 88% of the 27 EU Member States' R&D expenditures (GBOARD) is committed to national research. Source: ERAC-GPC 1305/1/14/REV1.

³ JRC, NetWatch Policy Brief No. 2

⁴ http://ec.europa.eu/research/era/what-joint-programming_en.html and ERAC-GPC 1310/14.

⁵ ERAC-GPC 1305/1/14/REV1, 30 October 2014

⁶ Typology refers here to: the systematic classification of alignment types (actions and instruments).

⁷ ERALEARN2020 Description of Action.

above, the present report will be used as an input for ERALEARN2020 Task 4.2. The overall objectives of ERALEARN Tasks 4.1 and 4.2 (which are both undertaken by INRA) are to develop a **common understanding** of what alignment means and **how it can be implemented in practice** by various actors at various levels, with a view to optimising the implementation of European P2Ps (see Table 1 below).

Table 1. Overview of ERALEARN2020 Work Package 4

WP4	Analysis of existing and potential modalities for aligning national/regional activities under common research agendas	MIUR (Italy)
Task 4.1	Definition and typology of alignment	INRA (France)
Task 4.2	Assessment of current approaches to alignment	INRA (France)
Task 4.3	Exploration and assessment of novel alignment modalities	AIT (Austria)
Task 4.4	Investigation of alignment modalities at trans-regional level	MIUR (Italy)
Task 4.5	Comparative SWOT analysis of alignment modalities	UNIMAN (UK)

1.4 Link with the EU High Level Group for Joint Programming (GPC)

The High Level Group for Joint Programming (*“Groupe de programmation conjointe”* or GPC) was established as a dedicated group of the European Research Area and Innovation Committee (ERAC) by the Council of the EU in 2008. Initially, the Group’s main goals were to identify and select proposals for JPIs, support their launch and design a set of voluntary guidelines for implementing “framework conditions” for joint programming, in view of contributing to the establishment of a European Research Area (ERA). In 2013, the GPC established new working methods in order to become more operational. Four ad hoc Working Groups were then set up to examine alignment, how to deepen relations between the GPC and JPIs, framework conditions for joint programming and measuring JPIs’ progress and impact.⁸ More recently, in February 2015, three Implementation Groups were established to look into how best implement the practical recommendations formulated by these Working Groups.

The **GPC Implementation Group on Alignment and Inter-operability**, in particular, will develop strategies and instruments to promote alignment in the context of joint programming and design guidelines to simplify and enhance the inter-operability of national rules and procedures that currently govern the funding of research throughout EU Member-States and Associated Countries.⁹ The implementation of the ERALEARN 2020 Task 4.1 is done in coordination with this GPC Implementation Group (via regular exchanges of information). Likewise, Task 4.1 builds on the GPC’s past work on alignment (e.g., EC-GPC Workshop on Alignment, 12 March 2014), in order to avoid duplication.

⁸ ERAC-GPC 1305/1/14, REV1, 30 October 2014 and ERAC-GPC 1310/14, 21 November 2014.

⁹ ERAC-GPC 1301/15, 26 January 2015.

2. What does alignment in a public-to-public context mean?

Several endeavours have recently been undertaken to better understand and define the concept of alignment in the European P2P environment, particularly in the context of Joint Programming Initiatives (JPIs). The results of these exercises are summarised below.

2.1 Definitions and goals of alignment

High Level Group for Joint Programming (GPC)

- The GPC provides the following definition: “Alignment is the strategic approach taken by Member States to modify their national programmes, priorities or activities as a consequence of the adoption of joint research priorities in the context of Joint Programming, with a view to implement changes to improve the efficiency of investment in research at the level of Member States and the European Research Area.”¹⁰
- Alignment of national research programmes and activities occurs around a common Strategic Research Agenda. In practical terms, it requires **changes** in the orientation and content of national research, the volume of research, the way the national programme or activity is executed (e.g., in its degree of collaboration with third parties) and changes in research outputs.
- Member States and Associated Countries are invited to take account of JPIs’ SRAs (where available) when designing their own national research and innovation strategies and programmes. In addition, they are invited to improve the inter-operability between their national programmes.¹¹

Existing JPIs

- While **none of the 10 JPIs¹² has provided a single definition of alignment**, each initiative has explained which alignment-related goals it was striving to achieve (at strategic and operational levels) and how. This has been summarised in **Annex 1** of this paper.
- JPI member countries have also emphasised that alignment isn’t just about organising joint calls for research proposals or collectively applying for additional EU funding. Rather, its ultimate purpose is to promote the **effective use of existing national research funds and capacities**.
- The FACCE-JPI established a *Working Group on Alignment* to reflect on how to carry out alignment in the context of its 2014/15 Implementation Plan. Interestingly, the Working Group highlighted that alignment is a **bi-directional process** whereby EU Members States and Associated Countries are expected to adapt their national research and innovation strategies and programmes to jointly defined JPI priorities, but where JPI strategic agendas also have to take account of Member-States’ priorities.¹³ This is seen as important to ensure political, financial and operational **buy-in** for alignment actions at the national (operational) level.¹⁴
- The Water JPI also discussed in greater detail the issue of alignment in the context of its Implementation Plan. A *Workshop on Alignment* was organised in Brussels on 22 October 2014 to discuss challenges, opportunities and recommendations for actions.¹⁵ An additional workshop is being organised on 19 November 2015.

¹⁰ ERAC-GPC 1305/1/14, REV1, 30 October 2014

¹¹ ERAC-GPC 1305/1/14, REV1 and ERAC-GPC 1310/14.

¹² (1) Alzheimer and other Neurodegenerative Diseases (JPND); (2) Agriculture, Food Security and Climate Change (FACCE); (3) A Healthy Diet for a Healthy Life (HDHL); (4) Cultural Heritage and Global Change; (5) Urban Europe JPI; (6) JPI Climate; (7) More Years, Better Lives - The Potential and Challenges of Demographic Change; (8) Antimicrobial Resistance- The Microbial Challenge; (9) Water JPI; (10) JPI Oceans.

¹³ Coordination and Support Action Proposal for FACCE-Evolve 2015-20, September 2014, SEP-210178289.

¹⁴ Figueroa and Stamm, in OECD, 2012.

¹⁵ <http://www.waterjpi.eu/images/ALIGNMENT/WJPI%20Align%20Pres1%20GL.pdf>

- JPI Oceans elaborated a document “*Proposal for Procedures for Design and Management of Joint Actions*” (2014) that provides an overview (typology) of different alignment actions as well as some practical guidance on how to implement these (e.g., joint calls, research alliances, networks, knowledge hubs, training, sharing infrastructure and data, foresight, etc.).

JPIs To Co-Work

- The main objective of the JPIs To Co-Work exercise has been to provide practical advice to implement JPI “**framework conditions**” defined by the GPC. These pertain to forward looking activities; the evaluation of joint programmes; funding of research; dissemination and use of joint research findings; and intellectual property rights.
- While this exercise has not provided a definition of alignment, it discussed, among others, how JPI joint actions could help align national research policies and research strategies and support the inter-operability and harmonisation of national research funding agencies’ (diverging) rules and procedures.¹⁶ The following elements were then considered:
 - Mapping of existing national research policies and agendas, and development of a European online database on research activities
 - Joint foresight activities
 - Joint policy actions (e.g., position papers, lobbying)
 - Common policies on research infrastructures in a certain field (e.g., medical infrastructure).
 - Joint research activities
 - Development of joint infrastructures
 - Toolbox on how to implement joint actions
 - Mobility events for funding agency members
 - Knowledge-sharing activities

Box 1 below proposes a common definition of alignment based on the GPC definition.¹⁷

Box 1. Definition of alignment in public-to-public partnerships

Alignment is the strategic approach undertaken by Member States to modify their national research programmes, priorities or activities as a consequence of the adoption of joint research priorities in the context of Joint Programming, with a view to improve the efficiency of investment in research at the level of Member States and the European Research Area.

- ⇒ Alignment can be implemented via (joint) actions undertaken by Member States or Associated Countries that aim to foster greater coordination and complementarities among national research priorities, programmes and activities **around jointly identified strategic priorities** (e.g., a Strategic Research Agenda).
- ⇒ Alignment thus aims to: (1) increase synergies amongst (existing) national research programmes and activities; (2) trigger cost-efficiencies in research financing (e.g., via leverage effects); (3) enhance the level of scientific performance; (4) help identify research gaps; and (5) maximise research impact on policymaking and innovation, in order to tackle more effectively societal challenges. **These goals could be used to assess progress with alignment.**¹⁸
- ⇒ Alignment is a **bi-directional process**, hence common strategic priorities and agendas should also take account of Member States’ national research priorities and interests.

¹⁶ JPIs TO CO Work Workshop on Funding Modalities and Peer Review for JPIs, 14-15 March 2013, Vienna.

¹⁷ ERAC-GPC 1305/1/14, REV1, 30 October 2014

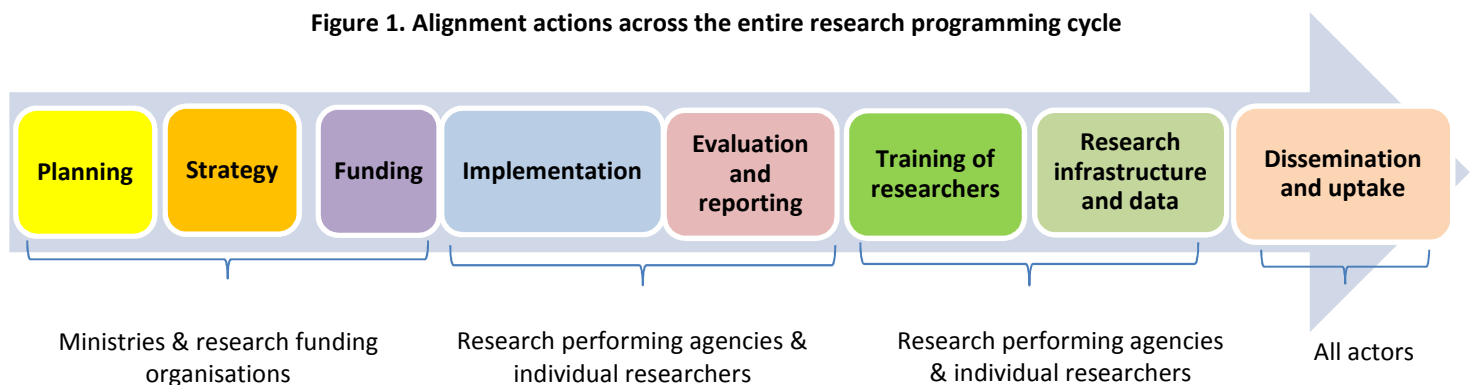
¹⁸ Monitoring and impact assessment of P2P networks will be further examined in the context of ERALEARN2020 Work Package 3.

3. Developing a typology of alignment actions and instruments

There are a variety of actions and instruments currently in use in Europe (beyond the organisation of joint calls for research proposals) that promote and facilitate the practical implementation of alignment (these are referred to as “alignment actions and instruments” in the remaining part of this paper). Such actions can in fact occur at **any stage** of the research programming cycle. They are not mutually exclusive but rather **complementary** to each other. In addition, such actions can rely on specific instruments, as is further explained below.

Alignment actions include: the conduct of joint foresight and mapping, the alignment of national research agendas via the elaboration of a Joint Strategic Research (and Innovation) Agenda and Implementation Plan, the execution of joint or complementary research programmes, e.g., based on smart specialisation, cooperation between research performing organisations, the standardisation of research methodologies, the organisation of joint calls for funding new collaborative research projects, joint ex-post evaluation of research activities, joint training and capacity building of researchers, the mutual use of (large) research infrastructures, open access to national research data, and joint dissemination and valorisation of scientific results (Figure 1).

Figure 1. Alignment actions across the entire research programming cycle



This paper proposes a typology that classifies **30 alignment actions and instruments** currently in use by various European public-to-public initiatives according to the research programming stage in which they usually occur. This method has been chosen in order to facilitate ease of reference for practitioners.

The typology includes the following elements:

- (1) *Description*: Short description of the alignment action and its intended goal.
- (2) *Overall approach*: This column specifies the overall approach on which the action relies. Alignment actions can rely on strategic, operational and/or financial approaches. JPIs, which concern the *entire* research programming cycle,¹⁹ can give rise to alignment actions that rely on all three approaches. A recent GPC study indeed emphasises that successful alignment across a JPI usually **combines** bottom-up and top-down approaches, e.g., cooperation at the operational/researchers’ level as well as at the financial and strategic/policy levels.²⁰ Likewise, countries participating in Article 185 Initiatives commit to integrate their national research programmes via operational and financial approaches.²¹
- (3) *Cooperation mode*: This column refers to the level or mode of cooperation on which the action relies. This paper distinguishes between the following: strategic partnership; programme

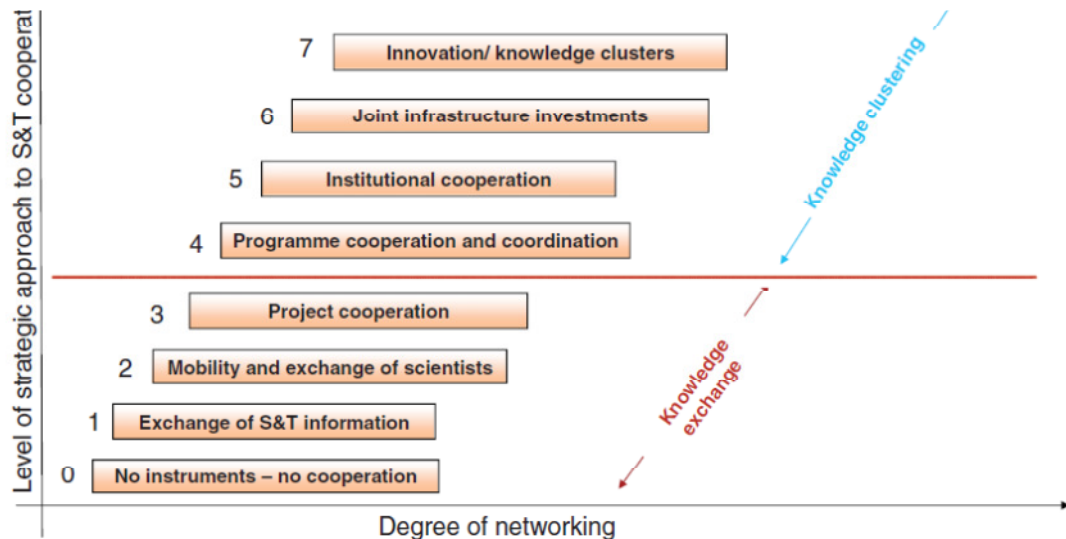
¹⁹ Joint Programming Initiatives are strategic, ‘umbrella’ approaches that aim to promote alignment amongst their participants across the entire cycle. Source: ERAC-GPC 1305/1/14/REV1, 30 October 2014

²⁰ ERAC-GPC 1305/1/14/REV1, 30 October 2014

²¹ EC Communication “Partnering in Research and Innovation”, 21 September 2011, COM(2011) 572/FINAL.

integration; programme cooperation; project cooperation; institutional cooperation; networking and capacity building amongst researchers (knowledge clusters); joint analysis; common research infrastructure and data; joint outreach; and cooperation at the meta-level (i.e., across P2P initiatives). These modes have been inspired by a typology of international science and technology cooperation developed by A. Gnamus (EC Joint Research Centre) (see Figure 2 below). Alignment actions occurring at different levels can be undertaken **in parallel** (cf. FACCE-JPI, which currently has six ongoing joint actions, including at the levels of knowledge clusters, project cooperation, and cooperation at the meta-level).

Figure 2. Development phases of international cooperation in science and technology



Source: Gnamus, 2009

- (4) *Intensity*: Within a single mode of cooperation (e.g., institutional cooperation), actions can have **varying levels of intensity** (or depth), depending on the context (e.g., association of research performing organisations vs. research alliance vs. joint research centre). In fact, some actions aim at promoting *cooperation* amongst national research institutes, programmes and activities while other actions aim at their *full integration* via the development of joint transnational institutes/programmes/activities.
- (5) *Available instruments*: This column explains on which alignment instrument the action can rely. Some alignment actions rely on **EC (Horizon 2020) instruments** (e.g., ERA-NETs) or benefit from some financial support from the European Commission for coordination (e.g., Coordination and Support Actions), while others mainly rely on Member States' research and innovation tools (e.g., knowledge hubs).²²
- (6) *Dedicated EC instrument*: When the action relies on an EC (supported) instrument, this column includes a 'yes'.
- (7) *Financing*: This column outlines on which financing sources the action relies, i.e., participating countries (cash and/or in-kind²³); EC or a combination of the two.

²² The GPC Report on Alignment (ERAC-GPC 1305/1/14/REV1) notes that while the responsibility to develop a common European Research Area mainly rests with Member States, the EC (with the EU Framework Programmes) disposes of tools that can incentivize national coordination financially.

²³ In-kind contributions include research performing organisations' staff time and facilities (e.g., office space, research infrastructure).

(8) *Implementation*: This column briefly outlines the practical steps usually involved in the implementation of the action. (Due to space limitation, it also includes weblinks which provide more detailed information).

(9) *Actors*: Alignment actions can involve various actors, including: European and national policymakers; national research funding organisations; national research performing organisations (e.g., research institutes and universities) and individual researchers.

(10) *Example(s)*: The last column includes some illustrative examples.

The typology proposed in this paper also includes columns on “benefits” and “weaknesses” (to be further developed in Task 4.2). Table 2 below provides a synthetic overview of the typology. **The full typology is available in the separate Excel Table (Table 3).**

Table 2. A synthetic typology of existing alignment actions and instruments

Alignment action	Approach	Cooperation mode	Instruments
RESEARCH PLANNING			
1. Conduct of joint foresight	Strategic	Joint analysis	* Joint foresight study * Standing Committee on Agricultural Research (SCAR) (EC)
2. Conduct of joint mapping	Strategic	Joint analysis	* Posters * Joint mapping meetings
RESEARCH STRATEGY			
3. Adoption of common strategic research priorities	Strategic	Strategic partnership	* Joint foresight and mapping meetings * Common vision * Strategic Research (and Innovation) Agenda (SRA/SRIA)
4. Adoption of a common strategic Implementation / Action Plan	* Strategic * Operational * Financial	Strategic partnership	* Consultations at national level * Implementation Plan
5. Conduct of joint stakeholder consultations	Strategic	Strategic partnership	n/a
6. Cooperation between JPIs	Strategic	Meta-level/ Cooperation across P2P initiatives	* Joint ERANET Cofund (EC instrument) * Joint advocacy activities * Joint outreach activities
7. Cooperation between a JPI and other European Research and Innovation initiatives	Strategic	Meta-level/ Cooperation across P2P initiatives	* Joint ERANET Cofund (EC instrument) * Joint advocacy activities * Joint outreach activities
RESEARCH FUNDING			
8. Synchronisation of national calls for research proposals	Financial	Project coordination	Standardised peer review system for research proposals
9. Organisation of a joint transnational call for research proposals ²⁴	Financial	Project cooperation	n/a

²⁴ Joint calls can rely on a virtual common pot, real common pot or a mixed mode between participating countries, see Table 4 in separate Excel sheet.

RESEARCH FUNDING (cont.)			
10. Organisation of a joint transnational call for research proposals (H2020 call)	Financial	Project cooperation	ERANET Cofund (EC instrument)
11. Establishment of several (interlinked and/or successive) transnational calls	Financial	Programme cooperation	Framework Partnership Agreement (EC instrument)
12. Joint calls between ERA-NETS and other European initiatives	Financial	Cooperation across P2P initiatives	Joint ERANET Cofund (EC instrument)
RESEARCH IMPLEMENTATION			
13. Establishment of an integrated joint research programme	* Operational * Financial	Programme integration	European Joint Programme Cofund (EC instrument) (<i>new</i>)
14. Establishment of a <i>long-term</i> , strategic integrated joint research programme	* Strategic * Operational * Financial	Programme integration	Article 185 Initiative (EC instrument)
15. Establishment of a (loose) network or association of research performing organisations	Operational	Institutional cooperation	* Memorandum of understanding (MoU) outlining the mission and activities of the network
16. Establishment of a Research Alliance	Operational	Institutional cooperation	* MoU outlining the mission and operation of the alliance * Joint programme of work
17. Establishment of a Joint Research Centre	* Strategic * Operational * Financial	Institutional cooperation	Agreement establishing a new legal entity
18. Establishment of a virtual Network of Excellence	Operational	Institutional cooperation	* Joint Programme of Activities (EC instrument)
19. Set-up of a network of researchers	Operational	Networking and capacity building amongst researchers	European Cooperation in Science and Technology (COST) (EC instrument)
20. Set-up of a network of individual researchers for a narrow thematic area of research (relevant to a JPI Strategic Research Agenda)	Operational	Networking and capacity building amongst researchers	Knowledge Hub
RESEARCH IMPLEMENTATION (RESEARCH METHODOLOGY)			
21. Coordination of scientific techniques and methodologies	Operational	Project coordination	Consultations
22. Standardisation of scientific techniques and methodologies	Operational	Project cooperation	* Consultations * Common research protocols and models
RESEARCH EVALUATION AND REPORTING			
23. Alignment of (ex-post) evaluation frameworks	Operational	Project/Programme cooperation	Common Monitoring & Evaluation framework
24. Harmonised reporting	Operational	Project/Programme cooperation	Standardised reporting template

TRAINING AND CAPACITY BUILDING OF RESEARCHERS			
25. Joint training of researchers	Operational	Networking and capacity building of researchers	* Joint workshops and training sessions * Training and mobility grants * Marie Curie training networks (EC instrument)
RESEARCH INFRASTRUCTURES AND DATA			
26. Shared use of existing national research infrastructures	* Operational * Financial	Common research infrastructure and data	Agreement on the procedures, rules, fees for the common use of research infrastructure
27. Establishment of a new joint European research infrastructure facility	*Strategic *Operational *Financial	Common research infrastructure and data	The European Research Infrastructure Consortium (ERIC) is a legal form designed to facilitate the joint establishment and operation of research infrastructures
28. Open access to national scientific research data	*Operational	Coordinated data management and storage	* Joint open data strategy (incl. IPR aspects) * Joint data management or data-sharing plan (which also covers compatibility across data protocols)
RESEARCH DISSEMINATION AND UPTAKE			
29. Coordinated or joint dissemination of scientific results	*Strategic *Operational	Joint outreach	Joint outreach and communications material
30. Joint outreach towards industry	*Strategic *Operational	Strategic partnership	*Joint public-private partnership agreements * Cooperation with EIP and KIC (EC instruments)

Some points to bear in mind:

- Alignment actions can be achieved in various research fields, including where there is already a wealth of research as well as in areas where research is scarce. Some alignment actions can in fact help identify **research gaps** and promote new joint research, in view of addressing a societal challenge.
- Alignment can be achieved within the framework of a P2P initiative (which is the focus of this study) as well as at the **meta-level, i.e., across several P2P initiatives**, for example amongst two (or more) JPIs on related research themes (e.g., JPI FACCE and JPI Water), or between JPIs and other European research and innovation initiatives. Such alignment has the potential to trigger greater coherence in the European Research Area *as a whole*.
- JPI members often decide which alignment actions and instruments to use, and in what order of priority, in light of the JPIs' specific objectives and context, and the **capacities and ambitions of JPI member states**. Full alignment of all relevant national research programmes and activities within a JPI's remit is an ambitious, long-term process!
- Several JPIs have launched **pilot joint actions** before or during the elaboration of their joint Strategic Research Agenda and Implementation Plan, in order to "test" different alignment actions and instruments (e.g., FACCE-JPI and Oceans JPI).

4. Main challenges to alignment

While there are a variety of actions and instruments that can facilitate the alignment of national research programmes and activities, there are still several stumbling blocks that hinder the latter. Box 2 below outlines in brief the key barriers to alignment:

- Lack of common understanding and terminology
- Insufficient inter-operability between various national rules and procedures for funding and executing research
- Weak in-country coordination and consultations on strategic research priorities
- Lack of sufficient national funding to support transnational coordination
- Difficulty to show concrete results from alignment in the short-term

The degree of divergence of national rules and procedures for funding and executing research and innovation (i.e., **inter-operability problem**) is seen as the main stumbling block at the operational level. This is further explained below. (Inter-operability will be further examined in ERALEARN Task 2.2 that will examine JPI “Framework Conditions”).²⁵

(A more detailed assessment of the weaknesses/challenges of *specific* alignment actions and instruments will be produced in the context of the ERALEARN2020 project, Task 4.2).

Box 2. Main challenges to alignment in a European P2P context and possible ways to overcome these

1. There is a lack of common understanding of what exactly alignment means, what the national benefits are and which tools are available for alignment (esp. at the researchers’ level).

=> National research funding and performing agencies need to develop and disseminate a common understanding of alignment (e.g., via common terminology and definition) and explain that the latter is promoted, among others, in order to tackle more effectively societal challenges. Relevant Ministries need to raise awareness of the benefits, value-added and tools for alignment amongst all concerned actors, active at all levels (particularly amongst individual researchers, whom could benefit from increased visibility thanks to co-authored international publications).

2. There is weak in-country coordination (e.g., between Ministries and between research performing agencies *within* one country; and between Ministries, research funding agencies and research performing agencies within one country).²⁶

=> National Ministries and government agencies could: (1) strengthen their internal governance structures and inter-ministerial coordination (e.g., via the set-up of interagency advisory boards or inter-ministerial groups, esp. for JPIs whose themes cut across several disciplines, as is the case in The Netherlands)²⁷; (2) make sure JPI Governing Board members represent the views of their country as a whole (as opposed to their affiliated institute) and are also in charge of national research policy and funding on the same themes as the JPI in their own country; and (3) encourage high-level political support for improved internal coordination, and for alignment more generally; (4) involve, and build on, existing national coordination fora (e.g., national agricultural research alliance; national environmental research alliance in France, *AllEnvi*).

²⁵ ERAC-GPC 1310/14, 21 November 2014.

²⁶ GPC Alignment Survey Report, Sept. 2015. See also the FACCE-JPI Working Group on National Ownership.

²⁷ Norway also provides a good example, see GPC-EC Alignment Workshop, March 2014, ERAC-GPC 1305/1/14/REV1.

3. There are differing national rules, processes and timeframes for financing and executing research across Member States and Associated Countries (e.g., formulation of strategic research agendas, research budget allocation, grant process, etc. but also differing working languages). This problem of inter-operability is perceived as a key (technical) barrier to alignment.

=> National funding agencies could consider: (1) simplifying national rules and procedures; (2) making them inter-operable (compatible), and standardise them whenever possible (e.g., by using one same language for all calls across the EU, using common terminology and/or the same “minimum standards” in their call and other funding procedures); or by (3) developing new, common tools and guidelines regarding procedures for funding research, e.g., based on Horizon 2020 rules (e.g., common standardised online tool).

4. Alignment is complex and bears high transaction costs. Furthermore, national funding agencies can often only run competitive calls to finance actual research projects and have often no means to finance transnational coordination or networking.

=> (1) Member-countries could internalise the cost of coordination, e.g., by promoting institutional, in-kind financing for alignment and/ or by allocating some financial resources to coordination (“glue money”); and (2) in parallel, the EC could further incentivize national coordination financially, by providing additional funding to support alignment (e.g., via Coordination and Support Actions and new Horizon 2020 financial instruments).

5. Concrete results from alignment actions are currently difficult to document due to lack of sound Monitoring and Evaluation Frameworks, time lags and attribution problems.²⁸

=> JPIs should develop specific, measurable and realistic performance indicators to assess the degree of alignment over time. (This will be further examined in another Work Package of the ERALEARN2020 project).

Source: ERAC-GPC 1310/14, ERAC-GPC 1305/1/14/REV1, IDDRI Review of FACCE-JPI, 2014, Alignment Workshop, 29/09/15

To conclude, key factors for successful alignment include:

- The combination of **bottom-up** (researchers, researcher performing organisations) alignment actions such as knowledge hubs and other researchers’ networks, and **top-down** alignment actions (Ministry, research funding organisations) such as joint, long-term integrated research programmes and the set-up of common research centres and infrastructures.
- Strong political commitment (e.g., Nordforsk “common pot without fair return”)
- Mutual trust and consensus-building at all levels (researchers, research performing and funding organisations, Ministries, etc.) via regular consultations and dialogue.

²⁸ The EC will conduct an assessment of the 10 existing JPIs by end 2015.

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Consulted websites

EC website on joint programming: http://ec.europa.eu/research/era/what-joint-programming_en.html

Dutch portal on the European Research Area, JPIs and ERA-NETs: <http://www.jointprogramming.nl/>

Platform website : www.era-platform.eu

ERA Portal Austria: <http://era.gv.at/directory/146>

Water JPI Workshop on Alignment:

<http://www.waterjpi.eu/images/ALIGNMENT/WJPI%20Align%20Pres1%20GL.pdf>

ANNEX 1. ALIGNMENT IN THE CONTEXT OF EXISTING JPIS

Joint Programming Initiative on Food Security, Agriculture and Climate Change (FACCE-JPI)

- The *French Institute for Sustainable Development and International Relations'* (IDDRI) Review of FACCE-JPI, which includes a survey amongst FACCE- JPI actors, pinpoints that alignment can mean any of the following:²⁹
 - Agreeing on a common strategy for European research (i.e., alignment at strategic level);
 - Adapting existing/forthcoming national research programmes to JPI core themes;
 - Aligning new national calls with FACCE-JPI core themes;
 - Coordinating national research institutions or existing national research projects; and
 - Developing common research protocols and methodologies.
- The FACCE-JPI distinguishes between: (1) alignment of existing national programmes, projects and activities (in areas where there is already a lot of research in participating countries); and (2) joint investments in *new* transnational research programmes, projects and facilities (e.g., new collaborative research projects in 'gap' areas).³⁰

Joint Programming Initiative 'Urban Europe'

- This JPI aims to promote alignment at strategic and operational levels via the development of a joint Strategic Research and Innovation Agenda, the launch of joint calls for research proposals, the alignment of national programmes (see below), the establishment of a Research Alliance, and joint research dissemination and valorisation.
- *"Alignment of National Programmes is a long-term activity geared towards helping JPI Urban Europe member countries (and their national funding agencies) identify potential benefits from working together and overcoming fragmentation of research in urban issues by aligning national (research) programmes".*
- A first series of mapping exercises has been completed to further develop this activity:
 - A mapping of research agendas and strategies of European initiatives, platforms and networks based on the evaluation of their respective time horizons, scope and themes;
 - A mapping of national research programmes based on the alignment of their topics to the objectives and orientations of the JPI Urban Europe;
 - An assessment of EC-funded activities in the last framework programmes.

Joint Programming Initiative on Neurodegenerative Diseases (JPND)

- While this JPI does not provide a definition of alignment, its stated aim is to align members' national strategies and activities. JPND is working to align specific areas of existing national strategies relevant to neurodegenerative diseases. It also has a programme of actions aimed at encouraging countries to develop new (joint) research strategies. In addition, a JPND Action Group is seeking to identify areas whereby nationally-funded investments and activities can be aligned. (Identified areas include: longitudinal-based cohort studies; assisted living technologies for neurodegenerative diseases; and animal and cell models).

²⁹ IDDRI Review of FACCE-JPI, February 2014.

³⁰ FACCE-JPI Implementation Plan 2014/15, October 2013.

Joint Programming Initiative - Healthy Diet for a Healthy Life (HDHL)

- No definition is provided yet the JPI goals are to: coordinate the scope of research programmes; promote scientific excellence and critical mass through joint activities with common funding and peer-review processes; support cross-border collaboration for data pooling and data collection; and promote cross-border policy learning.

JPI Climate

- JPI Climate is a collaboration between 14 European countries that strive to coordinate jointly their climate research and fund new transnational research initiatives.
- JPI Climate joint actions include:
 - Alignment of national research programmes
 - Joint research funding by research calls
 - Conferences, workshops and academic courses
 - Policy support actions
 - Collaboration with other research programmes, networks and initiatives

JPI on 'More Years, Better Lives' - the Challenges and Opportunities of Demographic Change

- This JPI seeks to enhance coordination and collaboration between European and national research programmes related to demographic change. It has decided to do so by focusing on 4 research domains and 11 specific research topics.
- The alignment approaches proposed include:
 - Transnational literature reviews,
 - Developing innovative methodologies,
 - Development of transnational and interdisciplinary networks,
 - Training of researchers,
 - Active engagement of end-users, clients and subject groups,
 - Data systems and access.

Water Challenges for a Changing World – JPI Water

- The Water JPI aims to encourage alignment of existing and future national research agendas. Many of the activities in the Co-ordination and Support Action of the Water JPI (WatEUr) aim to facilitate and strengthen alignment.
- These include:
 - The mapping of national research projects and programmes
 - Development of agreed pan-European priorities, as demonstrated by the Strategic Research and Innovation Agenda (SRIA)
 - Common agreement on instruments to be applied by the Water JPI
 - Joint calls and participation in ERA-Nets.
- One of the tasks within WatEUr is specifically focused upon harmonisation of agendas with the objectives of: examining opportunities for alignment; reducing duplication and fragmentation; and increasing and monitoring coordination and collaboration.

Healthy and Productive Seas and Oceans- JPI Oceans

- This JPI has launched 4 pilot actions in order to test various alignment tools and approaches:
 - Multi-use of infrastructures for monitoring
 - Ecological aspects of micro-plastics in the marine environment
 - Ecological aspects of deep-sea mining
 - Intercalibration for the EU Water Framework Directive
- In addition, JPI Oceans elaborated a document “Proposal for Procedures for Design and Management of Joint Actions” (2014) that provides an overview (typology) of different alignment actions as well as some practical guidance on how to implement these (e.g., joint calls, research alliances, networks, knowledge hubs, training, sharing infrastructure and data, foresight).

JPI on Antimicrobial Resistance - JPI-AMR

- JPIAMR provides the forum and platform for initiating and coordinating joint actions jointly with Stakeholders beyond issuing joint calls. It is not clear from the website what other alignment actions are planned.

JPI on Cultural Heritage and Global Change

- This JPI stresses the need to streamline and coordinate national research programmes with those of the European Commission in order to improve the efficiency of the scarce financial resources, avoid overlaps and exploit synergies.
- The website of this JPI only refers to joint calls.